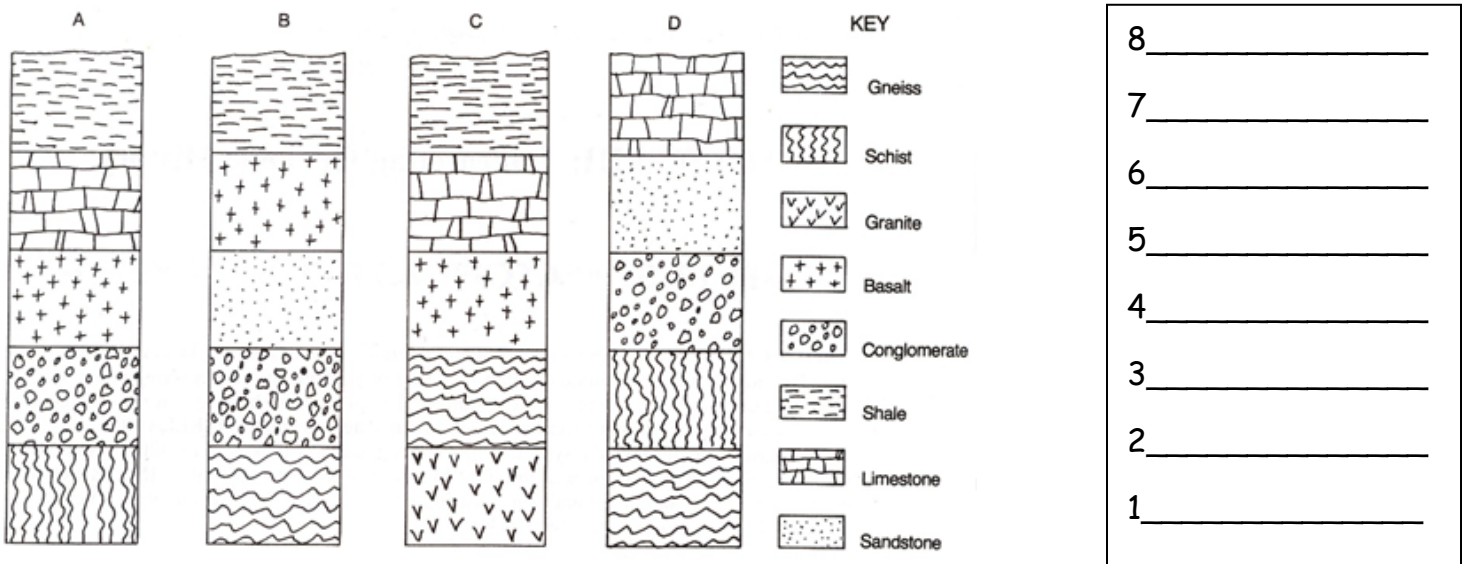


Background:

When observing a road-cut, the different **strata** (layers) of rocks become obvious. Geologic events such as deposition, erosion, volcanism and faulting are preserved in the rock and it is possible to determine the sequence of events from oldest to most recent. Sequencing events establishes the relative age of a **stratum** (layer). The process of showing that rocks or geologic events occurring at different locations are the same age is called **correlation**. Index fossils and similar rock types help geologists establish correlations between rock outcrops that are far apart. An **outcrop** is the part of a **rock** formation that appears above the surface of the surrounding land.

Procedure:

Below are cross-sections from four different locations in New York State. Reconstruct the complete sequence of events and write the rock layer names in order. 1 = oldest/first to be laid down and 8 = youngest/most recently laid down. Assume that the oldest rocks are on the bottom and the youngest are on the top. Each rock type is used only once (eight strata total).



- There were only 5 layers of rock in each of the different locations in New York, yet we know that there were at least 8 layering events. What 2 things could have happened to cause these locations to only have 5 layers?
 _____ or _____
- Which rock layers above occurred due to magma flow? (2) _____
- Which rock layers occurred due to compaction and cementation? (4)

- Which rock layers occurred due to heat and pressure? (2) _____
- Which rock layers seem to be missing in sample B?

- What could have happened to those layers? _____ or _____